

ABSTRACT OF THE DISCLOSURE

The invention relates to a holographic viewing device that has a high diffraction efficiency, enables bright patterns with less noticeable conjugate or higher-
5 order images to be viewed in place of light sources in a scene and is easy to fabricate with consistent characteristics. The holographic viewing device comprises a frame and a computer-generated hologram constructed as a transmission Fourier transform hologram and fitted in the
10 frame. The computer-generated hologram 20 comprises minuscule cells having pitches δ_x and δ_y , with a reconstruction image area 30 defined by a range of spreading of \pm first-order diffracted light of given wavelength from a diffraction grating having grating
15 pitches $2\delta_x$ and $2\delta_y$ that are twice as large as the pitches of cells, and an input image pattern, reconstructed at that wavelength in a range of up to 2/3 of the reconstruction image area 30, is recorded in the computer-generated hologram.

20